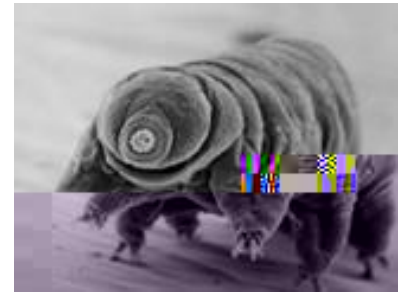


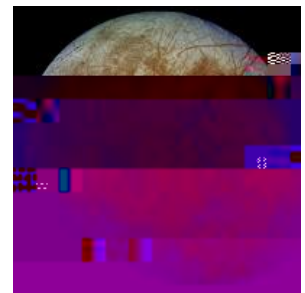
Scientists study life on Earth to make predictions about what kinds of life forms could exist on other worlds.

Some living organisms, called **extremophiles**, thrive in very harsh environments, including volcanic vents deep in the ocean, dry deserts, cold ice sheets, dark acidic caves, and many more. Each of these living things have adaptations to help them survive in their environment.



to make predictions about what kinds of life forms could exist on other worlds. Studying extremophiles and their environments can help us understand the conditions that support life, and predict what kinds of life might be found on different planets. This information provides clues about where and how to search for life beyond Earth.

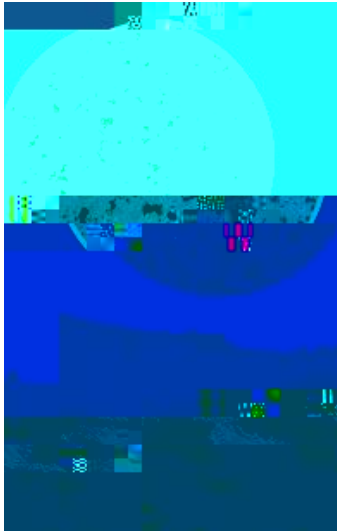
Right now, we have no direct evidence of life in places other than Earth, but scientists continue to search. They expect that if alien life forms do exist, they will be specially adapted to their environment. Most of the alien life forms are expected to be very different from Earth, so any living things we find beyond Earth will probably be very different, too.





Tardigrades (also called water bears or moss piglets) can live in a variety of extreme environments, including high mountains, rainforests, and deep seas. ~~84) - 900000s 1~~ ~~temp(c) - 2.5~~ reW<sup>n</sup> horests,

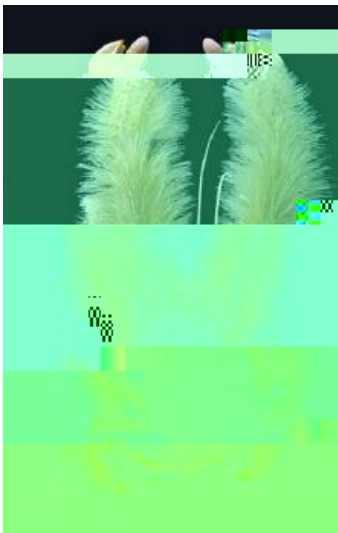




*Richard and Pam Winegar*

For many years people thought the reddish color on high alpine snowfields was caused by a mineral, but researchers have discovered that it's actually huge colonies of algae. Snow algae grow in the freezing water created by melting snow. The algae look and even smell a little like watermelon!

Scientists are trying to determine if Jupiter's moon Europa might have the right conditions to have forms of life that tolerate cold.



*University of Hawaii Manoa,  
MoraLab / Enrique MacPherson*

Sightless, hairy yeti crabs live near hydrothermal vents deep in the ocean. Bacteria coating their hairs eat toxic minerals emitted from the vents. The crabs may eat the bacteria, or they may scavenge on dead things falling from above.

Scientists think life in other parts of the universe won't look very much like life here on Earth. But we haven't found any evidence of alien life yet!